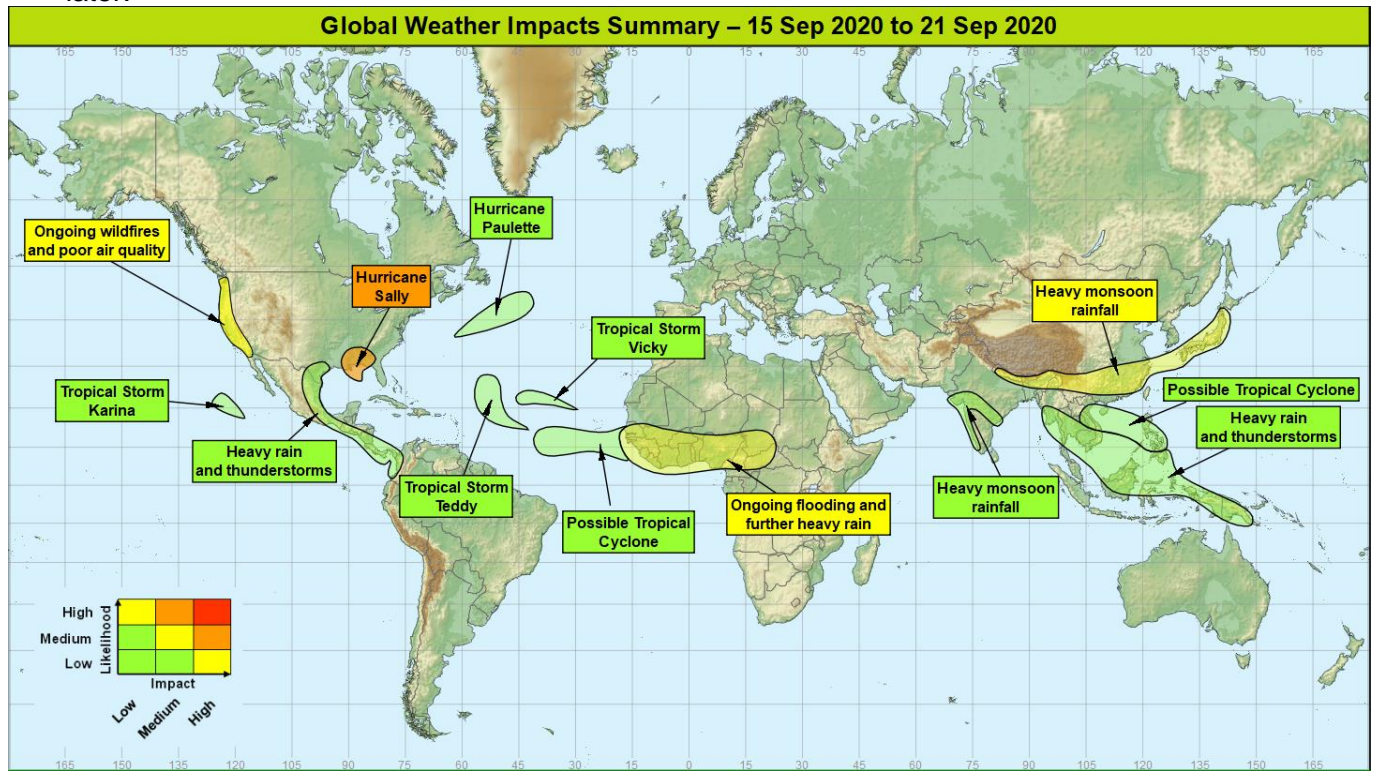


## Global Weather Impacts – Tuesday 15<sup>th</sup> to Monday 21<sup>st</sup> September 2020

Update to Hurricane Sally area- Issued on Tuesday 15<sup>th</sup> September 2020

### HEADLINES

- Hurricane Sally likely to make landfall along Louisiana/Mississippi coast today.
- Hurricane Paulette now heading away towards the Mid-Atlantic.
- A very active period for hurricanes in the Atlantic with further developments in the days to come.
- Flooding likely to be exacerbated across parts of Africa and south Asia by further monsoon rainfall.
- Wildfires ongoing across the western USA maintain poor air quality – some respite in the north later.



### Tropical Cyclones

#### Hurricane Sally (Gulf of Mexico including Mississippi, Alabama and Louisiana)

##### Weather

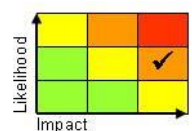
Sally is now moving towards the Louisiana/Mississippi coast, expected to make landfall later today, although even at this stage there is a degree of uncertainty in this aspect as it hugs the southern USA coast. Sally is most likely to make landfall as a category 2 hurricane with sustained winds of around 100mph. Whilst there remains some uncertainty in the exact track and intensity, impacts from winds, storm surge and heavy rainfall are expected to extend far from the centre. The heaviest rainfall is likely to affect the central Gulf Coast region where 250-300 mm, locally 500 mm, is possible. For context, this region typically receives 130-150 mm in September.

##### Discussion

Sally still has time to intensify under a seemingly conducive environment in the immediate future as it travels over SSTs in excess of 30°C, before a combination of increasing westerly wind shear and land interaction will probably slow the intensification rate thereafter.

##### Expected Impacts

Sally is expected to produce surface water and riverine flooding across portions of the Gulf coast from Louisiana to Alabama and into northwest Florida and is likely to cause flooding property and damage to infrastructure. Hurricane conditions are expected to develop along this coastline with a life threatening storm surge from the mouth of the Mississippi River east to the Alabama/Florida border.



**This forecast may be amended at any time**

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## Hurricane Paulette (North Atlantic)

### **Weather**

Hurricane Paulette made landfall as a category 1 Hurricane, with the eye passing directly over Bermuda on Monday with sustained wind speeds of around 90mph. It is now a category 2 hurricane (with sustained winds of 105 mph) heading northeast over the open Atlantic and is not expected to pose any further threat to land, despite possibly strengthening further before becoming post-tropical.

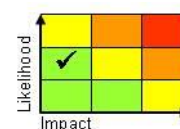
### **Discussion**

Paulette should intensify to be at- or near major hurricane strength at some point today.

Weakening will commence as the cyclone becomes involved with a mid-latitude shortwave trough approaching from the Canadian Maritimes. Paulette should begin losing its tropical characteristics toward the end of the week.

### **Expected Impacts**

No further impacts.



## Tropical Storm Teddy (Tropical Atlantic)

### **Weather**

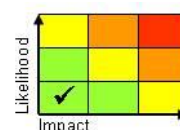
Tropical Storm Teddy will track northwestwards and intensify in the coming days, likely becoming a hurricane later today. However the storm is expected to remain over the open ocean with no direct impacts to land.

### **Discussion**

Teddy will be moving through a favourable environment for intensification for the next several days, with SSTs increasing along the forecast track and shear remaining relatively low. The NHC intensity forecast is similar to the previous one, showing Teddy reaching major hurricane strength in 4 to 5 days.

### **Expected Impacts**

Nil.



## Tropical Storm Vicky (Tropical Atlantic)

### **Weather**

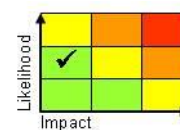
Another tropical storm has been named Vicky in the mid-Atlantic from the remnants of an Easterly Wave which came close to Cabo Verde over the weekend. However, Vicky is expected to be fairly short-lived and not pose a direct threat to land.

### **Discussion**

This should be a short-lived tropical cyclone as increasing southwesterly shear is expected to quickly weaken Vicky to a depression in a couple days, and the system is expected to degenerate to a remnant low by Thursday

### **Expected Impacts**

Nil.



## Tropical Storm Karina – Eastern Pacific

### **Weather**

Karina lies around 600 miles SW of the southern tip of Baja California with sustained winds of around 50 mph. This system is expected to track slowly toward the northwest through the next couple of days whilst weakening and remain well away from any land.

### **Discussion**

Karina's likely track will take the system into an increasingly hostile environment, so no further strengthening is forecast at the moment, with weakening and dissipation expected by the end of the week.

### **Expected Impacts**

Nil.



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*The following areas are being monitored for potential tropical cyclone development affecting land:*

**Western Pacific Ocean/South China Sea****Weather**

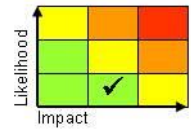
A tropical disturbance currently crossing The Philippines is expected to continue into the South China Sea over the next couple of days. Models suggest that this may then undergo some development as it moves west across the South China Sea, and may well become a tropical storm toward the end of the week, by which time it will likely be approaching eastern Vietnam.

**Discussion**

There remains a good deal of spread in the models on likely track and intensity, however the main models are converging on a track likely to impact eastern Vietnam by the end of the week.

**Expected Impacts**

The system is currently bringing enhanced rainfall to The Philippines, but the greater risk of any impacts would be to eastern Vietnam at the end of the week into the weekend, with a risk of damaging winds and flood impacts.

**Tropical North Atlantic (to the west of West Africa)****Weather**

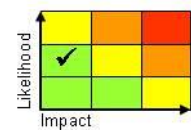
Areas of heavy showers and thunderstorm will continue to drift off the western coast of north Africa, with the NHC currently forecasting a 50% likelihood of a tropical system developing in the next two days as further African Easterly Waves (AEWs) move off the African coast.

**Discussion**

A tropical wave near the west coast of Africa is producing disorganised shower and thunderstorm activity. Environmental conditions appear to be conducive for slow development of the system this week as the wave moves westward.

**Expected Impacts**

No impacts are expected in the short-term, with this particular development likely to stay to the south of Cabo Verde.



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**Europe**

Nil.

**North America**

**(Gulf of Mexico including Mississippi, Alabama and Louisiana)** – See *Tropical Cyclones* section.

**Wildfires (Western USA)****Weather**

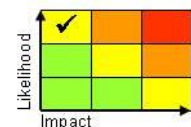
Hot/Dry Fire weather conditions are ongoing and consequently air quality is expected to remain very poor across a wider part of western USA, particularly California. However, the northern parts of this area (esp. Oregon and Washington) are finally likely to see spells of rain, most especially towards the end of the week, with 20 to 30 mm likely to fall in some spots, which should at least help to dampen any wildfires in these states.

**Discussion**

Little change in the situation initially, but towards the end of the week a relatively active frontal system will approach the northern part of this area bringing some much-welcome rain.

**Expected Impacts**

Continued poor air quality and critical wildfire conditions continue through this week.

**Southeastern Mexico**

See Central America and Caribbean

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## Central America and Caribbean

### Heavy rain and thunderstorms - Southeastern Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama and western Colombia

#### **Weather**

There are likely to be further showers and thunderstorms quite widely in this region in the coming week, with rainfall forecast to be above normal for the time of year.

#### **Discussion**

A very warm and moist southwesterly flow from an area with higher than normal SSTs, with upper-level temperatures falling a little through the week will all conspire to bring heavy showers and thunderstorms in the coming week. Rainfall totals of 100 to 200 mm are likely widely, with some parts seeing 300 to 400 mm by the weekend, and much of the precipitation will fall as intense downpours. With the developing La Niña pattern, precipitation should gradually ease here in the medium term.

#### **Expected Impacts**

The potential for flash and riverine flooding across much of the region, with an enhanced risk of landslides in areas where terrain is steep.



## South America

Western Colombia – See Central America and Caribbean

## Africa

### Ongoing heavy rains (Sub-Saharan Africa)

#### **Weather**

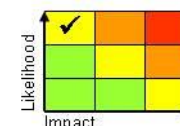
Further periods of prolonged, heavy showers and thunderstorms will affect the region at times in the coming week. Whilst not all areas will see heavy rain, each day 50-75 mm could fall in places within a few hours, and over this period the wettest areas may see 200 mm build up. This does tend to be the wettest time of the year in the region, but the forecast rainfall will still be significant, especially given recent flooding events in the past week.

#### **Discussion**

The monsoon trough currently lies close to its climatological northern extent. Along and to the south of this trough lies moisture-laden air, with the African Easterly Jet periodically buckling due to the passage of African Easterly Waves.

#### **Expected Impacts**

The potential for further flash and riverine flooding across much of the region, with an enhanced risk of landslides in areas where terrain is steep (such poorly located settlements on the edge of expanding cities). Along the northern boundary of the highlighted region strong wind gusts from thunderstorms will likely trigger dust storms reducing air quality and impacting travel.



## Middle East

Nil.

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## Asia

### **Heavy Monsoon rains (Nepal, northeast India, northern Bangladesh, Bhutan, northern Myanmar, southern China and Japan)**

#### **Weather**

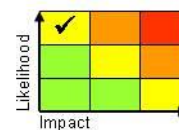
Further spells of heavy rain and thunderstorms are expected over large parts of southern and southeastern Asia in the coming week thanks to an ongoing active monsoon. It won't be wet all the time, there will be drier interludes between the rains, but the intensity and frequency of showers will bring some large totals of rain over the next week, after what has already been a particularly wet monsoon season. The heaviest rainfall is expected across Nepal, Bhutan and northeast India where 100-150 mm falling in a few hours in some locations is expected, with totals for the week over 400 mm in places.

#### **Discussion**

A developing La Niña and negative Indian Ocean Dipole pattern is projecting similar to a phase 4 MJO across southern Asia and is likely to maintain above average rainfall here through the coming week. Meanwhile, upper troughs within the mid-latitude flow further north will bring spells of heavy rain to Japan as it draws upon the retreating monsoon moisture here.

#### **Expected Impacts**

Increased risk of flash flooding and landslides in mountainous areas. Risk of flash flooding and riverine flooding in small catchments and urban areas.



### **Heavy Monsoon Rain (Southern and central India)**

#### **Weather**

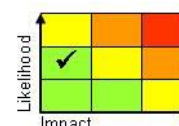
An active pulse in monsoon rains is expected over the next week across much of southern India. Overall the highest rainfall totals are likely to build up over the Western Ghats with 200-300mm building up in places over the next few days. Elsewhere, many areas will see 100-150 mm of rain.

#### **Discussion**

The Monsoon trough to the north will strengthen the southwesterly flow over the coming days bringing an abundance of warm and moist air onshore, this combined by orography and large scale ascent provided by the withdrawing MJO, will lead to some heavy and prolonged showers and thunderstorms in the coming days.

#### **Expected Impacts**

Increased risk of flash flooding in places.



### **Heavy rain and thunderstorms (Vietnam, Laos, Cambodia, Thailand, southern Myanmar, Indonesia, Malaysia, southern Philippines, Brunei and Papua New Guinea)**

#### **Weather**

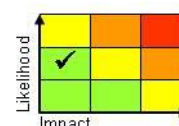
Heavy showers and thunderstorms will continue to be more frequent, intense and widespread than normal over the coming few days. Around 50-75 mm of rain could fall in a couple of hours in places, with overall accumulations through the week of around 150-250 mm. At the beginning of the week the risk is mainly in the eastern part of this area, transferring west by the end of the week.

#### **Discussion**

Higher than normal SSTs in the region, and enhanced easterly trade winds, in part due to the developing La Niña like conditions, is fuelling deep convection, with showers and thunderstorms more intense and frequent than is usual for the time of year. An AEW moving through the region is likely to enhance activity this week.

#### **Expected Impacts**

Increase in the risk of flash flooding, and landslides in mountainous areas.



## Australasia

Nil.

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**Additional Information****Cox's Bazar, southeast Bangladesh**

Whilst showers and thunderstorms are possible on each day, this week overall will be around- or even a little drier than average. There are increasing signs now of it becoming wetter over the weekend and into next week, with an increased flood-risk.

**Yemen**

The development of isolated heavy showers is likely to remain focused over the Western Highlands. Activity is expected to be around average for the time of year.

**Sudan/South Sudan**

Daily heavy showers and thunderstorms are expected through the next week across South Sudan and the far-south of Sudan. Probably wettest in parts of South Sudan with 50 to 75 mm building in a few locations – which is not unusual at this time of year. This is now the latter part of the wet season which means localised flash flooding events are a little more likely where the heaviest showers fall.

**Mainland Europe, away from Iberia**

Whilst not likely to cause too many impacts, a late-summer heatwave is likely for parts of Mainland Europe, peaking early this week. Temperatures are likely to be widely some 5-10°C above normal, with parts of France seeing temperatures some well in to the 30s.

**Issued at:** 150850 UTC      **Meteorologists:** Chris Almond / Ele Hands

**Global Guidance Unit**

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